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Application No.: 10/074,600

Filed: February 12, 2002

TC Art Unit: 2157

Confirmation No.: 4837

REMARKS

The foregoing Amendment is filed in response to the official action dated March 20, 2007. Reconsideration is respectfully requested.

The status of the claims is as follows:

Claims 1-4, 6-12, and 14-18 are currently pending.

Claims 1-4, 6-12, and 14-18 stand rejected.

Claims 1, 6, 9, 14, and 17-18 have been amended.

The Examiner has rejected claims 1-4, 6-12, and 14-18 under 35 U.S.C. 103(a) as being unpatentable over Khansari et al. (USP 6,446,131) in view of Tomizawa et al. (USP 6,598,092). The Applicants respectfully submit, however, that base claims 1 and 9, as amended, and the claims depending therefrom, recite non-obvious subject matter that distinguishes over the art of record, and therefore the rejections of claims 1-4, 6-12, and 14-18 under 35 U.S.C. 103 should be withdrawn.

For example, amended base claim 1 recites a data communications network that comprises a plurality of data communications rings including a first ring, a second ring, and a third ring, at least one first node coupled to the first ring, at least one second node coupled to the second ring, a first bridge linking the first ring to the second ring, and a second bridge

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linking the second ring to the third ring. At least the second ring is configured for spatial reuse, and at least the first node includes an end station. As recited in amended claim 1, the second bridge is operative to learn an association between the first bridge and the end station coupled to the first ring. In addition, the second bridge is operative, upon receiving a packet destined for the end station, (i) to forward the received packet as a broadcast transmission between the second bridge and the first bridge in a manner indicating that the packet is to be examined by each second node coupled to the second ring, in the event that the association between the first bridge and the end station coupled to the first ring has not yet been learned, and (ii) to forward the received packet as a unicast transmission from the second bridge to the first bridge, in the event that the association between the first bridge and the end station coupled to the first ring has been learned.

The official action indicates that the Khansari reference teaches a data communications network including a plurality of bridges, in which a second bridge is operative to forward a received packet as a unicast transmission to a first bridge in the event an association between the first bridge and an end station has been learned. Specifically, the official action directs the

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Applicants' attention to column 7, lines 18-28, of Khansari et al., which discloses that if a destination address is found in a filtering database 56, then a packet is transmitted as a unicast transmission to a destination node (see also Figs. 5 and 8 of Khansari et al.).

The Applicants respectfully point out, however, that the Khansari reference teaches that if (1) a new frame includes a unicast destination address, (2) the unicast destination address is found in the filtering database 56, and (3) an inbound port number associated with the frame is not the same as the destination address port, then the new frame is forwarded to the destination address port (see column 7, lines 18-25, of Khansari et al.). Significantly, as taught by Khansari et al., the inbound port where the new frame was received, and the destination address port to which that frame was forwarded, are part of the same bridge, namely, the first bridge 12 (see column 7, line 19, and Figs. 2a-2b, of Khansari et al.).

The Applicants respectfully submit that the Khansari reference neither teaches nor suggests forwarding a received packet as a unicast transmission from a second bridge to a first bridge, in the event that the association between the first bridge and an end station coupled to a first ring has been learned by the

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second bridge, as recited in amended base claim 1. In fact, with reference to Figs. 2a-2b of Khansari et al., the Khansari reference neither teaches nor suggests forwarding the new frame as a unicast transmission from the first bridge 12 to the second bridge 14, or from the first bridge 12 to the third bridge 16, under any conditions whatsoever. The Applicants further submit that the Tomizawa reference fails to cure this deficiency of the Khansari reference.

An important advantage is derived from the data communications network recited in amended base claim 1, namely, the ability to perform a "directed bridging" technique (see page 6, lines 27-30, of the application). As described in the present application, the data communications network of amended claim 1 employs the directed bridging technique to forward packets as unicast transmissions from the second bridge to the first bridge, once the association between the first bridge and the end station has been learned by the second bridge. The Applicants respectfully point out that the unicast transmissions performed by the data communications network of amended claim 1 do not merely take place between ports contained within the same bridge, as taught by Khansari et al., but instead take place from the second bridge to the first bridge, i.e., from bridge-to-bridge. The

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first bridge then forwards the packet to its intended destination, i.e., the end station. In this way, the data communications network of amended claim 1 exploits the spatial reuse capability of data communications rings, performing unicast transmissions wherever possible to reduce the need for bandwidth-wasting broadcast transmissions (see page 6, lines 27-30, of the application).

Because neither the Khansari reference nor the Tomizawa reference teaches or suggests the data communications network of amended base claim 1, in which a second bridge is operative to learn an association between a first bridge and an end station coupled to a first ring, and, upon receiving a packet destined for the end station, to forward the received packet as a broadcast transmission between the second bridge and the first bridge in a manner indicating that the packet is to be examined by each node coupled to the second ring in the event that the association between the first bridge and the end station coupled to the first ring has not yet been learned, and to forward the received packet as a unicast transmission from the second bridge to the first bridge in the event that the association between the first bridge and the end station coupled to the first ring has been learned, the combined teachings of the Khansari and Tomizawa references

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would not suggest to one of ordinary skill in this art at the time of the invention the subject matter of amended base claim 1 and the claims depending therefrom. For at least the reasons discussed above with reference to amended claim 1, the Applicants further submit that the combined teachings of the Khansari and Tomizawa references would not suggest to one skilled in this art at the time of the invention the subject matter of amended base claim 9 and the claims depending therefrom. Accordingly, it is respectfully submitted that the rejections of claims 1-4, 6-12, and 14-18 under 35 U.S.C. 103 should be withdrawn.

In view of the foregoing, it is respectfully submitted that the present application is in a condition for allowance. Early and favorable action is respectfully requested.

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The Examiner is encouraged to telephone the undersigned Attorney to discuss any matter that would expedite allowance of the present application.

Respectfully submitted,

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